AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled).

2. (Currently Amended) A liquid-amount detecting apparatus for detecting the amount of a liquid contained in at least one container, the liquid detecting apparatus comprising:

a liquid detecting circuit comprising an electrode unit formed by a pair of electrodes that is to be disposed in contact at least partially with the liquid in the container, the pair of electrodes being electrically connected to each other when the pair of electrodes is in contact with the liquid; a source impedance; and an alternating-current signal source;

wherein the liquid detecting circuit inputs an alternating-current signal not containing a direct-current component to the electrode unit through the source impedance, outputs a signal representing a status of electrical connection between the pair of electrodes, and outputs a binary signal representing the presence or absence of an electrical connection between the pair of electrodes based on the output signal; and

a determining means for determining the presence or absence of the liquid at the electrode unit based on the binary signal output from the liquid detecting circuit and wherein the electrode unit is provided in each of a plurality of containers, and wherein the liquid detecting circuit sequentially outputs, by time division, signals representing a status of electrical connection between each of the respective pairs of electrodes in the plurality of containers.

3. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the binary signal representing the presence or absence of an electrical connection between the pair of electrodes is output based on a period of the alternating signal generated by the alternating-current signal source.

4. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the liquid detecting circuit generates a clock signal for outputting the binary signal representing the presence or absence of electrical connection between the pair of electrodes, and exercises control so that the alternating-current signal generated by the alternating-current signal source and the clock signal ~~will be~~ are synchronized with each other.

5. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein a plurality of the electrode units are ~~unit is~~ provided in the single container and disposed at a plurality of positions in a direction of lowering of a liquid surface in accordance with decrease of the liquid in the container, wherein the liquid detecting circuit outputs binary signals representing the presence or absence of electrical connection between the respective pairs of electrodes, and wherein the determining means determines, in a stepwise manner, the remaining amount of the liquid in the container based on the binary signals associated with the respective pairs of electrodes.

6. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein a plurality of the electrode units are ~~unit is~~ provided in the single container and disposed at a plurality of positions in a direction of lowering of a liquid surface in accordance with decrease of the liquid in the container, wherein the liquid detecting circuit outputs, based on a period of the alternating-current signal generated by the alternating-current signal source, binary signals representing the presence or absence of electrical connection between ~~the respective pairs~~ each respective pair of electrodes, wherein the determining means determines, in a stepwise manner, the remaining amount of the liquid in the container based on the binary signals associated with ~~the respective pairs~~ each respective pair of electrodes, and wherein the alternating-current signal source is connected to the plurality of electrode units such that a connection of the alternating-current signal source with one of the plurality of electrode units can be switched to a connection ~~of the alternating-current signal source to~~ with another one of the plurality of electrode units, the connection between the alternating-current signal source and each of the plurality of electrode units being switched in synchronization with the period of the alternating-current signal.

7. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein a plurality of the electrode units are ~~unit is~~ provided in the single container and disposed at a plurality of positions in a direction of lowering of a liquid surface in accordance with decrease of the liquid in the container, wherein the liquid detecting circuit outputs binary signals representing the presence or absence of electrical connection between the respective pairs of electrodes, wherein the determining means determines, in a stepwise manner, the remaining amount of the liquid in the container based on the binary signals

associated with the respective pairs of electrodes, wherein the liquid detecting circuit generates a clock signal for outputting the binary signals representing the presence or absence of electrical connection between the respective pairs of electrodes, and exercises control so that the alternating-current signal generated by the alternating-current signal source and the clock signal will be synchronized with each other, and wherein the alternating-current signal source is connected to the plurality of electrode units such that a connection of the alternating-current signal source with one of the plurality of electrode units can be switched to a connection ~~of the alternating-current signal source to~~ with another one of the plurality of electrode units, the connection between the alternating-current signal source and each of the plurality of electrode units being switched in synchronization with the clock signal.

8. (Canceled)

9. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the electrode unit of the liquid detecting circuit is disposed inside the container, and wherein parts of the liquid detecting circuit other than the electrode unit and the determining means[[,]] are disposed outside the container.

10. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein a plurality of the electrode units are ~~unit is~~ provided, and wherein impedance characteristics of the plurality of electrode units are common so as to facilitate determination for binarization.

11. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the liquid detecting circuit outputs the binary signal representing the presence or absence of electrical connection between the pair of electrodes using at least one of a positive-polarity signal and a negative-polarity signal of the alternating-current signal.

12. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the liquid detecting circuit is allowed to disconnect the alternating-current signal source from a node of the electrode unit to which the alternating-current signal is input ~~from the alternating-current signal source~~.

13. (Currently Amended) A liquid-amount detecting apparatus according to Claim 2, wherein the liquid detecting circuit is allowed to disconnect the alternating-current signal source from a node of the electrode unit to which the alternating-current signal is input ~~from the alternating-current signal source~~, and to thereby connect the alternating-current signal source to a grounding point or a connection at ~~certain~~ a predetermined potential.

14. (Canceled).

15. (Currently Amended) A liquid-amount detecting method for detecting an amount of a liquid contained in at least one container, wherein an alternating-current signal not containing a direct-current component is input from an alternating-current signal source to an unit through a source impedance, the electrode unit being formed by a pair of electrodes that is to be disposed in contact at least partially with the liquid in the container, the pair of

electrodes being electrically connected to each other when the pair of electrodes is in contact with the liquid, wherein a signal representing a status of electrical connection between the pair of electrodes is output, wherein a binary signal representing the presence or absence of electrical connection between the pair of electrodes is output based on the output signal, and wherein the presence or absence of the liquid at the electrode unit is determined based on the binary signal. and

wherein the electrode unit is provided in each of a plurality of containers, and wherein the liquid detecting circuit sequentially outputs, by time division, signals representing a status of electrical connection between each of the respective pairs of electrodes in the plurality of containers.

16. (Original) A liquid-amount detecting method according to Claim 15, wherein the binary signal representing the presence or absence of electrical connection between the pair of electrodes is output based on a period of the alternating signal generated by the alternating-current signal source.

17. (Currently Amended) A liquid-amount detecting method according to Claim 15, wherein a clock signal for outputting the binary signal representing the presence or absence of electrical connection between the pair of electrodes is generated, and wherein control is exercised so that the alternating-current signal generated by the alternating-current signal source and the clock signal will be synchronized ~~with each other~~.

18. (Currently Amended) A liquid-amount detecting method according to Claim 15, wherein a plurality of the electrode units are ~~unit is~~ provided in the single container and disposed at a plurality of positions in a direction of lowering of a liquid surface in accordance with decrease of the liquid in the container, wherein binary signals representing the presence or absence of electrical connection between the respective pairs of electrodes are output, and wherein the remaining amount of the liquid in the container is determined in a stepwise manner based on the binary signals associated with the respective pairs of electrodes.